สถาบันสุขภาพเด็กแห่งชาติมหาราชินี

ระดับ Electrolyte และ Blood gas ในโรคไข้เดงกิวและไข้เลือดออกเดงกิว

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งานวิจัยแพทย์ประจำบ้าน: ปี ๒๕๓๖
ELECTROLYTE AND BLOOD GAS IN DENGUE FEVER AND
DENGUE HEMORRHAGIC FEVER

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Electrolyte and blood gas levels are important in assessing the status of a patient. A 177-year-old woman was treated for electrolyte and blood gas levels in a hospital. The serum electrolyte levels were as follows:

- Sodium: 133.6 mEq/L
- Potassium: 128.35 mEq/L
- Blood gas: normal

The patient was treated with fluid replacement and metabolic compensation. It is important to monitor electrolyte and blood gas levels regularly to ensure proper treatment.

**Fluid Management**: Use isotonic saline solution (0.9%) to replace lost fluids.

**Metabolic Compensation**: Ensure proper supplementation of electrolytes.
ABSTRACT

A prospective study on 177 dengue fever and dengue hemorrhagic fever patients who were admitted to the Children's Hospital during October 1992 and March 1993 was performed in order to measure serum electrolyte and blood gas. The objective is to determine the change in electrolyte and blood gas levels and compare the values between various degrees of severity and each day of the illness. All patients whose sera were confirmed to have dengue infection were clinically classified as 21 dengue fever and 23, 59, 68 and 6 dengue hemorrhagic fever grade I, II, III, and IV patients respectively. The male to female ratio was 1:1.22. The patients age ranged from 6 months to 16 years with the mean of 7.72 ± 3.54 years. The mean serum electrolyte and blood gas in dengue fever patients were within normal range throughout the course of the disease except for low level of calcium in each day of the illness but no one has any signs of hypocalcemia. The serum electrolyte and blood gas in dengue hemorrhagic fever patients were abnormal, particularly on day of shock or subsidence of fever. The mean serum sodium were lowest on that day and there was reverse correlation between mean serum sodium and severity of the disease, i.e., the mean serum sodium in grade I, II, III, and IV DHF patients were 133.63, 133.67, 129.82 and 128.35 mEq/l, respectively. Similar to the sodium levels, the mean serum calcium in dengue hemorrhagic fever patients were low and reversely correlated with the grades of severity of the disease on the day of shock or subsidence of fever. The mean calcium values in grade I, II, III, and IV were 8.28, 8.03, 7.61 and 7.35 mg/dl, respectively. The mean serum potassium and chloride were normal throughout the course of the disease. Mild of alkalosis on the day of shock or subsidence of fever was observed in the DF as well as DHF patients but
In DHF patients, there were metabolic compensation.

In conclusion, the important electrolytes change in DHF are low serum sodium and calcium so the recommendation for patients who are suspected of having DHF to drink ORS and/or fruit juice during febrile period is appropriate to prevent hyponatremia or hypocalcemia during shock or subsidence of fever and that the IV fluid used in replacement during this period should be isotonic salt solution which contain also calcium in the hope to minimize the severity of the disease.